

## CLAIMS

1. A film characterized in that the heat shrinkage ratio in the transverse direction of the film subjected to heat treatment under a condition of no tension for 30 min. at 180 °C is from 1.0 to 2.5%, and the film satisfies the following equations (1)-(4) simultaneously, with  $\alpha_{MD}$  ( $\times 10^{-6}/^{\circ}\text{C}$ ) and  $\alpha_{TD}$  ( $\times 10^{-6}/^{\circ}\text{C}$ ) being coefficient of thermal expansion in the longitudinal and the transverse direction, respectively, and  $\beta_{MD}$  ( $\times 10^{-6}/\%RH$ ) and  $\beta_{TD}$  ( $\times 10^{-6}/\%RH$ ) being coefficient of hygroscopic expansion in the longitudinal and the transverse direction, respectively.

$$-10 \leq \alpha_{MD} \leq 10 \quad (1)$$

$$\alpha_{MD}-10 \leq \alpha_{TD} \leq \alpha_{MD}-3 \quad (2)$$

$$-10 \leq \beta_{MD} \leq 10 \quad (3)$$

$$\beta_{MD}-10 \leq \beta_{TD} \leq \beta_{MD}-3 \quad (4)$$

2. The film according to claim 1, wherein the film satisfies the following equations (5) and (6) simultaneously, with EMD (GPa) and ETD (GPa) being Young's moduli in the longitudinal and the transverse direction, respectively.

$$8 \leq EMD \leq 20 \quad (5)$$

$$EMD \times 0.7 \leq ETD \leq EMD \times 1.7 \quad (6)$$

3. The film according to claim 1, wherein the polymer forming the film is an aromatic polyamide.

4. A magnetic-recording medium having a magnetic layer at least on one surface of the film according to any of claims 1 to 3.

5. The magnetic-recording medium according to claim 4, wherein the magnetic-recording medium satisfies the following equations (7)-(10) simultaneously, with  $\alpha'_{MD}$  ( $\times 10^{-6}/^{\circ}\text{C}$ ) and  $\alpha'_{TD}$  ( $\times 10^{-6}/^{\circ}\text{C}$ ) being coefficient of thermal expansion in the longitudinal and the transverse direction, respectively, and  $\beta'_{MD}$  ( $\times 10^{-6}/\%RH$ ) and  $\beta'_{TD}$  ( $\times 10^{-6}/\%RH$ ) being coefficient of hygroscopic expansion in the longitudinal and the transverse direction, respectively.

$$-10 \leq \alpha' \text{MD} \leq 10 \quad (7)$$

$$-5 \leq \alpha' \text{MD} - \alpha' \text{TD} \leq 5 \quad (8)$$

$$-10 \leq \beta' \text{MD} \leq 10 \quad (9)$$

$$-5 \leq \beta' \text{MD} - \beta' \text{TD} \leq 5 \quad (10)$$